Motivation

The number of sensors and the amount of data gathered on the factory floor increases constantly, while there are hidden resources, 85% of data and information are unstructured and 42% of all transactions are still based on paper.

Physical maintenance issues can cause costly disruptions in the manufacturing process. With predictive analytics, however, repairs and maintenance tasks can be prioritized and allocated to pre-planned outages based on real-time probabilities of various future failures. The strategy of predictive maintenance saves time and money and helps minimize costly production downtimes.

Predictive maintenance techniques such as vibration and thermal monitoring along with Reliability techniques such as Failure Modes and Effects Analysis (FMEA) and Root Cause Failure Analysis (RCFA) will result in bottom-line savings through early detection.
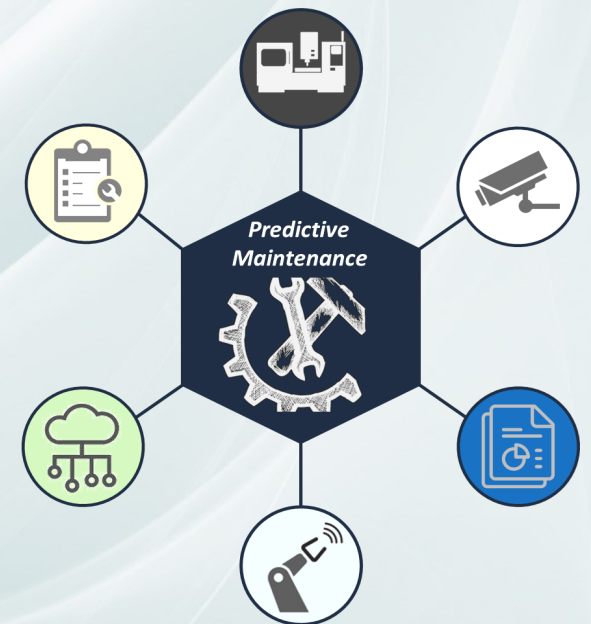
Who we are

FINN·POWER
Crimping since 1973

Fraunhofer
IPT

Whirlpool
CORPORATION

KONE

ENGINEERING

oculavis

DELLEMC

synArea
consultants

VTT

POLITECNICO
DI TORINO

TRIMEK
METROLOGICAL ENGINEERING

VDL

Project Management

LMS
Laboratory for Manufacturing Systems & Automation

Project Coordination

COMAU

http://www.serena-project.eu

SERENA

Versatile plug-and-play platform enabling remote predictive maintenance

Predictive Maintenance

About SERENA

SERENA will provide a bridge for transferring the latest R&D results in predictive maintenance towards inherently different industrial sectors considering the needs for versatility, transferability, remote monitoring & control, by providing:

⇒ advanced IoT systems and smart devices for collecting data from different resources (robots, machines, welding guns, PLCs, external sensors etc.) and cloud-based remote management of these data

⇒ platform for predictive maintenance activities & AR based operator local maintenance personnel support,

⇒ advanced artificial intelligence methods for predictive maintenance,

⇒ plug-and-play cloud-based communication framework.

SERENA represents a powerful platform to aid manufacturers in simplifying their maintenance burdens, by reducing costs, time and improving the productivity of their production processes.